

# Urban Recreational Riverfronts: Successful Revitalisation Elements

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## Abstract

This research identifies characteristics, which are the Theme, Identity, Functions and Authenticity of some current riverfront developments, mainly focusing in urban areas. The study began with the evolution of an urban riverfront<sup>1</sup>, including understanding how early settlements were established along the river<sup>2</sup>, later forming the town, leading to the present day cities and their inherent traditional urban culture value. Case studies selected were from South East Asia within Singapore and Sarawak in Malaysia. These examples will then be compared with London and Boston, USA. Much attention will be given to paying high respect to the cities' character and to acknowledging the historical and cultural background of the city where they are set by scrutinising their characteristics. The conclusion will be systematically analysed on design elements and careful considerations through design planning and sensitive approaches.

**Keywords:** *Urban Riverfront Revitalisation, Theme, Identity, Functions, Authenticity*

## Introduction

The concept of landscape architecture has long existed in Malaysia. However, the profession was almost unheard of until the late seventies, when the first group of landscape architects emerged upon graduation from universities abroad. The professionals were quick to respond to the impact of urbanisation and industrialisation, which called for a contribution from landscape architects, as stewards of the environment.

In Malaysia, the evolution of design on land or even at the edge of water can be interpreted from her social history. With the advent of international influence and the concern of the environment, local authorities have stressed the importance of landscape revitalisation in every project approved. For example, the British brought the concept of

urban green, city parks, resort landscapes and national parks to the then Malaya. One of the aspects which are experiencing the landscape outgrowth is the urban riverfront revitalisation. Realising the problems that could arise from rapid urbanisation, the local and city council in Malaysia, under the Housing Ministry is emphasising landscape design with a new township developments as well as the potential use of urban riverfronts.

Based on the topography and historical significance, most of the major cities and towns in Malaysia are situated on

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<sup>1</sup> Urban Riverfront means a dynamic area where cities engage their shorelines; Concise Oxford Dictionary.

<sup>2</sup> River means a copious stream of water flowing in channel to sea or lake or another river; Concise Oxford Dictionary.

the water edge. The country also has a number of rivers with great potential for wealthy recreation. For example, the Seban Cove in the coastal area of Johore has been developed on mangrove, where a natural area near the city centre was made accessible and environmental friendly. This model is typical of the response the world has towards the popularity of the recreational riverfronts.

For a successful urban riverfront revitalisation, the identification of characters as mentioned in the abstract is essential. With this consideration, the aim of the research is to establish a comparative study between the east and west urban riverfronts, namely the historical background; heritage and culture values. In order to achieve this aim, the following objectives are formulated:

1. To develop an understanding of rivers to the respective towns; and
2. To identify the characteristics of successful riverfront revitalisation in urban areas.

### Research Methodology

Several methods are being employed in meeting these objectives. Data and evidence were collected by the use of two methods that are the literature surveys and questionnaires.

The research began by obtaining reliable information from literature of related topics to provide the author with the understanding of urban riverfront revitalisation in formulating a personal knowledge on the characteristics in relation to design. It also assisted to develop research skills in identifying the keywords and to construct questionnaire surveys.

Data collections from literature reviews were found from recommended books, journals and research reports, Masters and PhD Thesis. Other important information was obtained by searching through the Internet webpages that proved particularly useful in cases where such

information would not be sufficiently available in library books or magazine articles. Here lies one of the most significant advantages of using the Internet: information on all kinds of topics is available on a worldwide basis and it is regularly updated.

The target groups for questionnaire were limited to designers and the client<sup>3</sup>. The query was designed to include 'open' questions, where respondents were free to word their answers the way they really felt. It was believed that the answers to 'open' questions could indicate relevant insights into aspects the author wanted to know but might not have thought to ask.

According to Sproull (1995), among other advantages of 'open ended' questions is that,

*'They can elicit creative and/or original information and can add new information when there is little existing information about this topic'* [Sproull, p202-203]

Another type of query included lists of possible answers of which at least one must be ticked. The author found that respondents always completed this type of question as they required minimum amount of time to fill in.

Analysing the information gathered was begun while still collecting them, especially regarding the literature search because the collection was continued until the last stage of the research.

### Statement of Research Constraints

The Landscape Architecture Periodical, in February 1991 issue discussed the topic 'Forum Waterfronts'. In the discussion, Tacha, a sculptor, designer of waterfront sites and a professor of art at Oberlin College quoted, *'Until water becomes as sacred throughout the world as it is in India, we will not develop a proper riverfront solution'*.

<sup>3</sup> Source of clients can be found at the end of this article.

The above statement is a reflection of the importance in total water management, in particular to the conservation of the natural resources. Due to lack of understanding about the built environment in combination with the rivers and the natural environment, rivers all around the globe are being abused and neglected. Furthermore, she stressed in specific the need for public accessibility in relation to the community and people with disabilities in particular, closer to the water.

Eskew, the principle of Eskew Filson Architects in New Orleans also supported the discussion. He stated, *'I have found that really what is more powerful is access to the water's edge...if you can get people to go to the water, the poetry is in the edge'*.

Therefore, it is necessary to incorporate the above factor in designing the urban riverfronts but more importantly the real need to provide continuous liveliness throughout the year.

Mann, the author of the book *Rivers in the City* also moderated the discussion. He mentioned *'Cities need to plan and build from the outset in a more enriching, enabling way so that activity can be built up to its proper peak in the early years of any waterfront project'*.

Based on the statement above, it has shown that the concept of mixed use development is the ideal, i.e. maximum activities are generated on riverfront sites. The facilities to be incorporated are restaurants, hotels, marinas and promenades. Along with that, sports activities should also be included. Besides boosting the tourism industry, the property value of such developed areas will be increased.

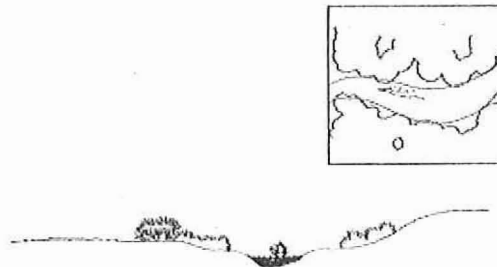
It is understandable that water plays an important psychological role to people. Users, especially children are consciously invited to use and enjoy the rivers. Obvious hazards should be avoided. Action should never extend to destroying essential characteristics in the interests of safety or to prohibit access to it.

## Evolution of the Urban Riverfront

The historical milestone of urban riverfront development can be divided into six eras (Mann, 1973):

### 1. First Riverfront Settlement (2000BC-100AD)

The process started with the river as the main source of transportation for travellers and goods. The growth of society continued along the river edge but the riverfront at the time was not one of the perquisites for the city's birth. This phase of history shows the significance of initial association between rivers and people (refer figure 1).



**Figure 1:**

River was the most important means of transportation for domestic and trade.

### 2. Middle Ages (100AD – 1600AD)

Travellers sailing along the river started to settle down along the river edge. Colonising along the riverbank may also have been for safety factor because the rest of the zone was still filled with dense forest. The river provided water resource for daily uses and trading operations (refer figure 2).

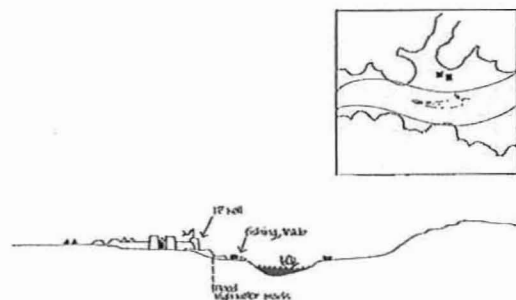


Figure 2:

Rivers became a primary criterion for city development.

### 3. Renaissance (1600AD – 1800AD)

The colony started to grow. Trees were cut down and land cleared for expansion. Business related to the river activity expanded and the river transformed into a focal point (refer figure 3).

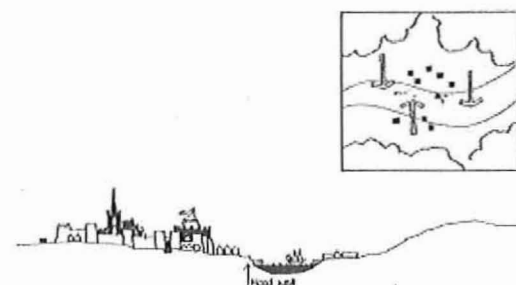


Figure 3:

When the city began to develop, the river became a necessity.

### 4. Industrialisation (1800AD – 1975)

The small settlement developed into towns and buildings were erected along the river to cater to trading activities. Structures, such as warehouses were built facing the river. The area was turning into a busy business district (refer figure 4).

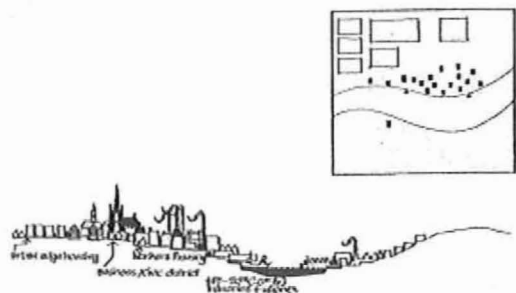


Figure 4:

Continuous development established in the perception of rivers as public open space corridors.

### 5. Decline of Riverfront (1975 – 1990)

As time progressed, better means of transportation were introduced. Roadways and rail networks were built for a more practical mode of transportation (refer figure 5).

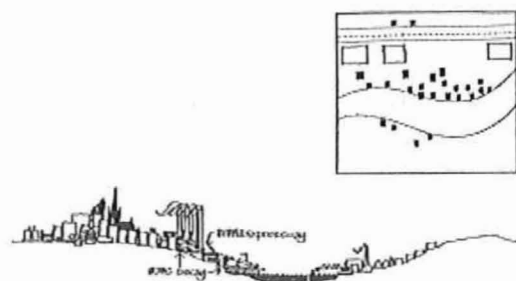


Figure 5:

Better transportation has provided easier access resulting in the river's decline as a form of communication.

### 6. Renewal of Riverfront (1990 – present day)

The new buildings erection and communities started to approach the technology. New development was based on the accessibility factor. The city began to turn their backs from the river and the river in turn was beginning to be neglected. It was regarded as the back alley of the growing city. Earlier buildings and traditional settlements remain along the riverfront together with the polluted river (refer figure 6).

According to Breen (1996), the design criteria of successful urban riverfront design can be categorised into three detail aspects: Public Accessibility, Attractions and Integration.

### 1. Public Accessibility

Access should allow users to commute easily between the riverfront esplanade and the city centre. However, office blocks or apartments often restrict pedestrian entrance to the riverfront (refer figure 7). Riverfront access is of two types that are the physical and visual. Physical access to the river must be direct and prominent. Visual entry on the other, is seeing that it is there and a sense of inviting should be subtle.

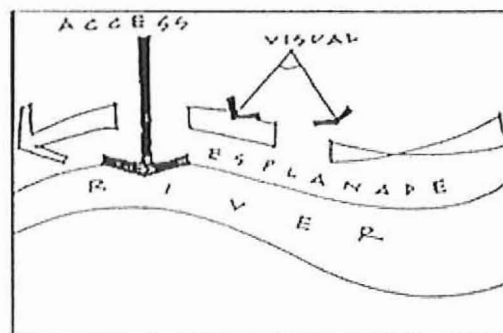


Figure 7:

Constraints imposed by highways, rail networks and tall structures must be brought under control so that the river as a public treasure is enhanced. The obstacle between banks, imposed by the river width can be eliminated by designs of walkways, bridges and water transport.

The public accessibility factor can be classified into three main aspects, i.e. Pedestrian, Vehicular and Visual Corridor.

#### a. Pedestrian

Pedestrian linkages through bridges and continuous promenade along the river are examples of connection to access the riverfront (refer figure 8).

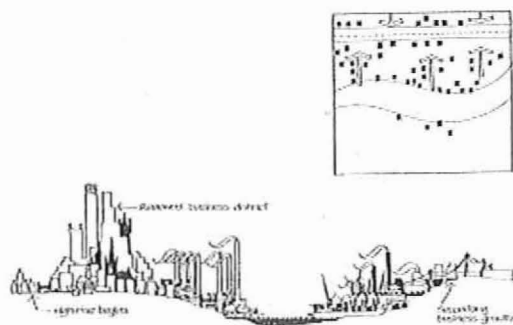


Figure 6:

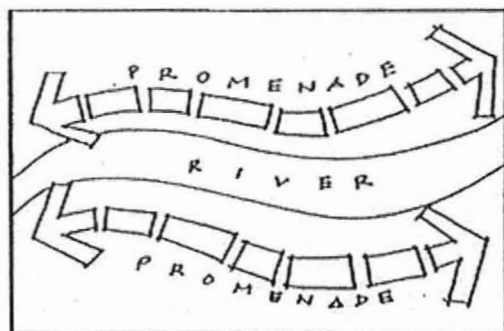
The river was regarded as the back alley of the developing city, which is a starting point in the abandonment of riverfronts.

### Approach to the Urban Riverfront Revitalisation

The river must be enlivened, expressing characters and qualities by contributing a unique image to the city, as the focal point of location and identification to users. The urban riverfront must be accessible in a pleasant way and secure at all time for users besides providing tourist attractions and social activities.

Hoyle *et al* (1988) in their reference work, *Revitalising The Waterfront* state that, 'The slow development of restaurants, pubs and other meeting places in the new port zones also contributes to the desire of personnel to remain in a centrally located area. The waterfront is becoming more accessible and attractive to the public as maritime museums, aquariums, restaurants, waterfront parks and marinas'.

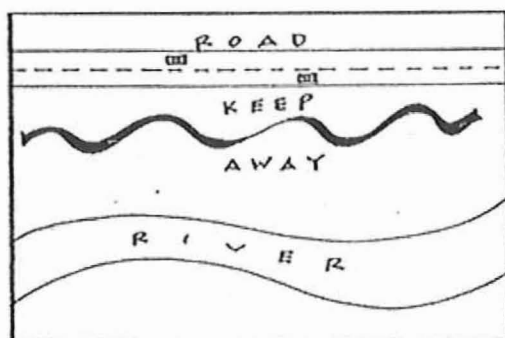
Hall, P. (1993) in his book *Waterfronts: A New Frontier for Cities on Water* explained the constraints of traffic and provision for different groups. 'Waterfront access, a critical factor is often poor because of highways, bridges or railroad tracks. Different groups have different perceptions of the ideal waterfront. The former dock workers want to see a return to the old economy, some community activist need to visual non-profit uses such as green parks and community centres, while commercial developers are interested in maximising commercial potential'.



**Figure 8:**  
Continuous and accessible promenade  
along the river.

b. Vehicular

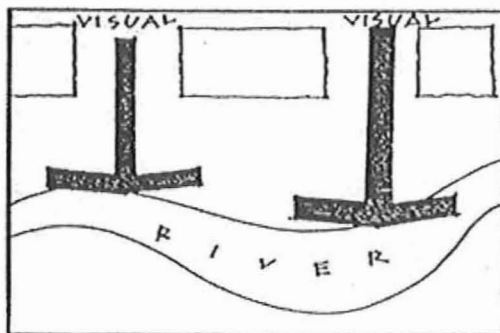
Road can be a physical barrier, obstructing the direct access of pedestrian to the river. However, road networks also contribute for people who travel by land transportation. Thus, convenient and adequate parking is vital (refer figure 9).



**Figure 9:**  
Road networks must be kept away from the  
river edge.

c. Visual Corridor

The purpose of visual corridors is to provide visual linkage between the existing urban fabric and the new development, which extends from the city centre and regain contact with the riverfront itself (refer figure 10).



**Figure 10:**  
Visual continuity between the existing city  
and the new development.

2. Attractions

Rivers offer inherent fascination of sound, coolness of water and historical values. A more conscientious effort should be applied to accommodate much more varieties with diversities in uses and activities. The new role of river will be as an amenity corridor with the potential for exhibition, recreation, leisure, relaxation and retreat. The urban recreational riverfront has a high potential to become a focal point. This concept underlines the structuring of space into accessible nodes, characterised by areas where users can socialise.

3. Integration

This concept involves the integration with the city and the continuity of experience. The development plan should include the river as the extension of town continuous with uses, visual connections and landmarks. For example, open spaces. Open space is defined as an interval of distance between two places, i.e. between the city and the riverfront. This is a vital contribution for the urban recreational riverfront where warehouses, which have no further use for the riverfront can be used to create an open recreational space.

The following four case studies summarise how these aspects can be applied in design and planning purposes. The author noted four main elements needed to



create a successful urban recreational riverfront that is Theme<sup>4</sup>, Image<sup>5</sup>(Identity), Authenticity<sup>6</sup> and Function.

According to Torre (1989) in his book, *Waterfront Development*, 'No matter how unique or exciting is a riverfront development, it can only be successful if it functions on all levels. From regional access and circulation to adequate parking capacity to ease and comfort of pedestrian movement to the visitors' overall experience, all levels must sequence successfully as well as meeting the capacities on peak activity days'.

### Case Studies: Four Cities

It is clear from the historical evidence that river has played an important role in the formation of early settlements and city development. Riverfronts of many cities throughout the world remain dominated by worn-out industrial activities and redundant transportation infrastructure. Opportunities to exploit these places for public access and recreational uses are vital and through this process, redefining the 'riverfront image' will be stressed.

Studies had been undertaken in existing situations to understand the role of riverfront image in urban fabrics. The objective is to develop the concept of *imageability* through comparing the image with visual reality, to the factors that create strong representations, culminating in specific design principles.

Stated by Lynch (1960) in his book *The Image of the City*, 'Imageability' is quality in a physical object, which gives it a high probability of evoking a strong image in any, given observer.

Analyses were therefore made of the central areas of three different locations, i.e. Sarawak and Singapore in South East Asia; Boston, Massachusetts in USA; and London, England.

Kuching Waterfront of Sarawak in Malaysia was an administrative port centre over 150 years ago. In just two and a half years, the once inaccessible and deteriorated riverfront has been transformed to a new dynamic pedestrian promenade. This project is a remarkable achievement in the country, that until recently had not demonstrated concern for public use of its riverfront.

In relation to the Singapore Riverfront, the ancient history of river revitalisation that moulds a unique riverfront had become a precedent study for other riverfront developments in this region. This is consonant with the Government plan to create a revitalised Singapore River.

The waterfront prototype chosen in United States is the Waterfront Columbus Park, Boston, Massachusetts. This site is situated on Boston's Harbour. This location has been chosen due to its unique transformation from a heavy maritime industrial site to a recreational riverfront park, leading to a unique identity of city's riverfront environment.

The South Bank along River Thames has the greatest opportunity for creating a chain of open space and transforming an underused thoroughfare into a place for communities. This broad river provides the city with its largest open area, offering a sense of freedom from congestion of urban life. The most recent development is the 135-metre high, world's largest observation wheel, the London Eye.<sup>7</sup>

<sup>4</sup> Theme means a unifying idea, image or motif developed throughout a work; Concise Oxford Dictionary.

<sup>5</sup> Image means a representation of an object; Concise Oxford Dictionary.

<sup>6</sup> Authenticity, from the word authentic means undisputed origin or genuine; Concise Oxford Dictionary.

<sup>7</sup> Note: This research has been concluded before the completion of London Eye.

## **Analysis on Design Elements used in the Four Cities**

### Kuching Riverfront, Sarawak, Malaysia

#### **THEME**

'People's Place' to bring society back to the river's edge and integrate the business district with tourist facilities and public space to create 'sinuous form' (refer figure 11).

#### **IMAGE**

To achieve a linkage between the city to the River, at the same time reinforcing Sarawak's heritage and culture via integrating artworks and motives (refer figure 12).

#### **AUTHENTICITY**

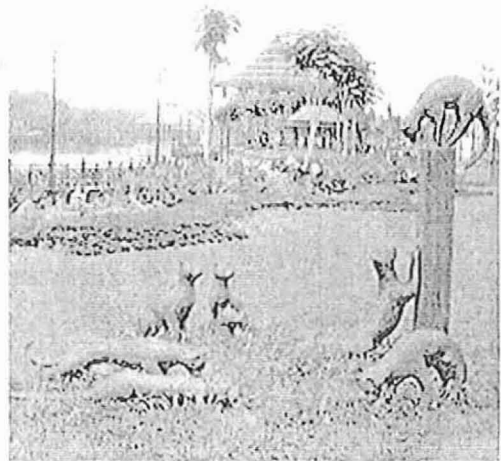
'Sampan's'<sup>8</sup>, which is Kuching's special characters, added to the authenticity of the riverfront. Refurbished historic buildings were also providing tourist activities and landmarks (refer figure 13a and 13b).

#### **FUNCTIONS**

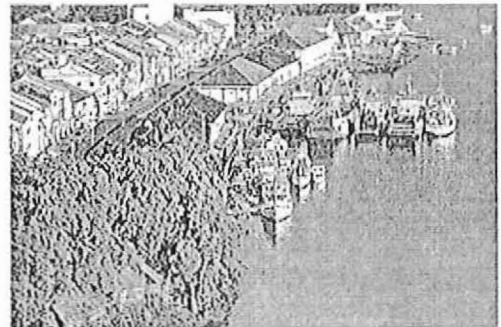
A series of entry points along the River park lead directly into the main attraction area. River steps create opportunities for river activities as well as closeness to the river's edge (refer figure 14).



**Figure 11:**  
Granite-paved promenade.



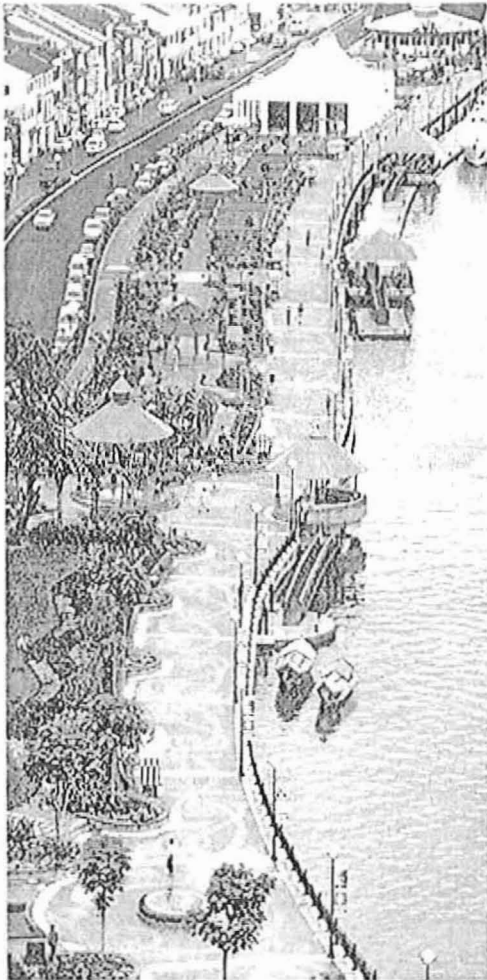
**Figure 12:**  
'Kucing Kucing', seven bronze cats by sculptor Gaye Porter.



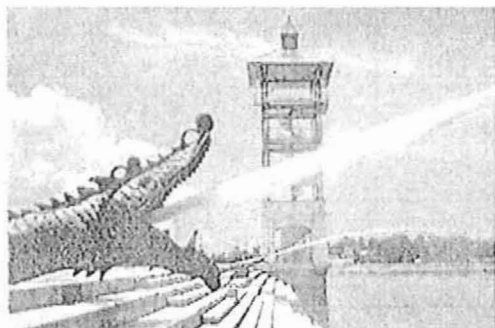
**Figure 13a:**  
The old riverfront.

<sup>8</sup> 'Sampan's' means small boats.





**Figure 13b:**  
The new riverfront: 'Sampan' still moored against the river, signifies a historical feature.



**Figure 14:**  
River steps with bronze dragon water sprout to enhance the entry points.

### Boat Quay, Singapore

#### THEME

The Singapore River has been regarded as the cultural heritage of the city. The historical structures along the river were conserved for adaptive reuse. These were balanced with leisure attractions from boating to dining (refer figure 15).

#### IMAGE

The riverfront maintains the old image of trading port by preserving elements related to the River's cultural heritage, i.e. shophouses and 'bumboats'<sup>9</sup> (refer figure 16a and 16b).

#### AUTHENTICITY

With the cleaning up of the Singapore River, the riverfront had been brought back to life with activities such as regattas and outdoor cafes

#### FUNCTIONS

Pedestrian access to the lively outdoor eating area and entertainment centre gives visitors the chance to enjoy the river environment along with convenient services for residential and working districts (refer figure 17).

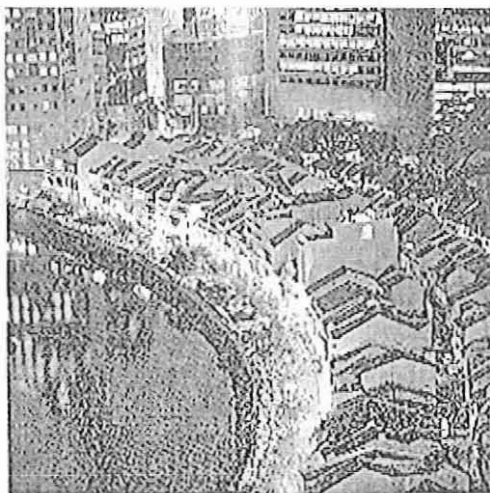


**Figure 15:**  
Pedestrian promenades are planned along the entire River to make walking a pleasurable experience.

<sup>9</sup> 'Bumboats' means traditional workhorses of the river.



**Figure 16a:**  
Before revitalisation: River vessels packed along the river.



**Figure 17:**  
The lightened promenade of Boat Quay, with its many bars and restaurants.



**Figure 16b:**  
After revitalisation: Old structures have been replaced by continuous promenade and outdoor dining. 'Bumboats' now used as a symbol for tourist transportation.

### **Waterfront Park, Boston, Massachusetts**

#### **THEME**

'Walk to the Sea', a highlight for pedestrian provides visual sequences and functional links between land and water in order to facilitate physical access to the Waterfront Park (refer figure 18).

#### **IMAGE**

The Waterfront Park attempts to retain a 'maritime character' where distinctive marine bollards and large anchor chain were laid in. (refer figure 19).

#### **AUTHENTICITY**

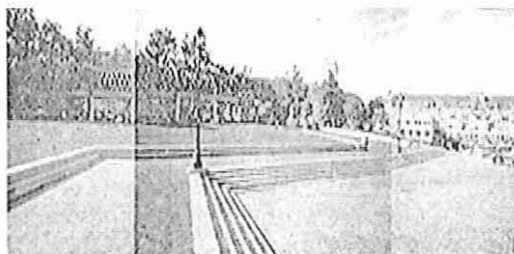
Boston city developed from the strong valuation of residents towards a unique heritage making Boston liveable. Added to that, the Waterfront's landmark has been the eye catching wood arched trellis with benches beneath it (refer figure 20).

#### **FUNCTIONS**

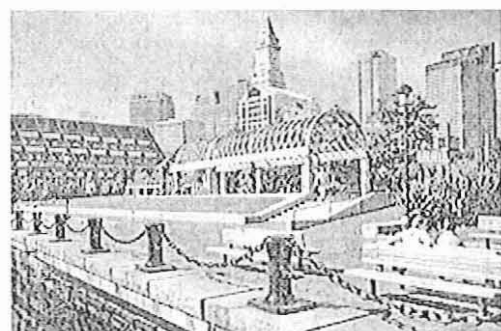
Accessible public open spaces such as a massive green lawn to accommodate activities, celebrations and exhibitions (refer figure 21).



**Figure 18:**  
Waterfront Park orientated to Boston's Harbour.



**Figure 21:**  
Visitors enjoy the walk to the Park's green oasis.



**Figure 19:**  
Distinctive bollards with large chains at the river edge.



**Figure 20:**  
The Trellis Walk creates interesting shadows.

### **SOUTH BANK, The Thames, London** **THEME**

Based on the 1969 London Development Plan, a specific thoroughness to improve the riverfront was applied. That is 'to create a better public access with new and improved river walks, laying out new open spaces or view points with the redevelopment of present unsatisfactory riverfronts and to insists on high quality for all riverside design and landscaping' (refer figure 22a and 22b).

### **IMAGE**

The most notable identity is its numerous historical bridges. These river crossings are elements in framing views and creating individual pockets of image in between. Another factor that enlivens the South Bank Riverfront is its public piers, moored historic vessels and sailing crafts (refer figure 23). The most current attraction on the South Bank of the Thames River is the London Eye, also known as the Millennium Wheel, which was opened in 1998 by the British Prime Minister, Tony Blair (refer figure 24)

### **AUTHENTICITY**

With introducing art along the river could explore the meaning of places appropriate with Europe's largest cultural complex, the Royal Festival Hall. This includes incorporating a typical craftsmanship design of the river wall, benches, signposts etc. from local material (refer figure 25).

## **FUNCTIONS**

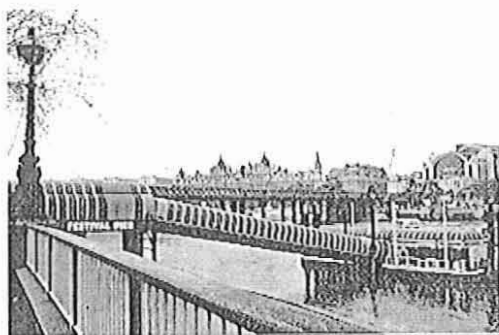
Based on the research data, facilities along the riverfront are still under improvement. However, with Stanton William and Richard Rogers's design intention, hopefully users will be able to enjoy the recreational riverfront environment (refer figure 26).



**Figure 22a:**  
South Bank in relation to Westminster and  
Thames River.



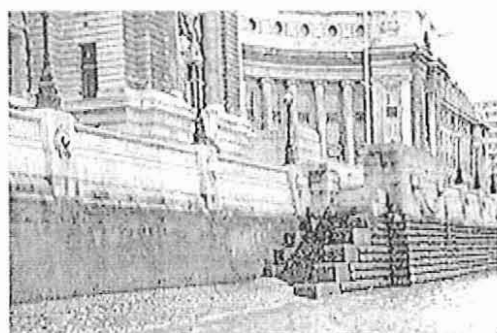
**Figure 22b:**  
Along the riverfront, there are intervals of  
viewing plains.



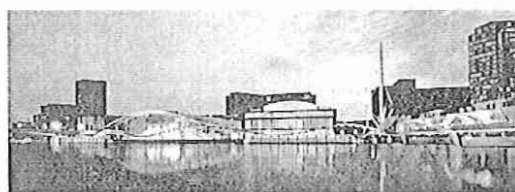
**Figure 23:**  
Festival pier located in front of the Royal  
Festival Hall.



**Figure 24:**  
London Eye on the Thames River.



**Figure 25:**  
Part of the River Wall and Steps.



**Figure 26:**  
Proposed Crystal Roof, which will create a  
covered meeting, place with cafes,  
restaurants, bookshops and galleries.

## **Conclusion**

From the above design analysis, the riverfront Image is closely related to the Theme in order to create a sense of identity to the place. The specialty of the city and river should be fully explored in order to

create an astounding image for the revitalised riverfront. Genuine activity that is strongly associated with the riverfront area is crucial in providing a convincing contextual foreground of a city where the river runs through. In order to attract users, the design elements should fulfil the users' needs and comfort. In other words, the urban recreational riverfront should be approachable to all users, including the disabled and the elderly. The achievement of riverfront schemes could range from an environmental improvement to a high

quality landscape design approach. In order to give back the riverfront to people, a transformation involving an attractive and useful condition to the locality as part of the urban fabric is crucial. Returning to the water edge involves many constraints: land use and zoning issues – liability, safety, access and circulation. Urban riverfront revitalisation should, therefore, reflect a creative translation forming a total package of the planning process including the participation of the societies to create the sense of belonging and shared renewed pride of the city.

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### Source of Clients

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